ZyXEL X-550

XtremeMIMO™ 802.11g Wireless Broadband Router

Quick Start Guide

Version 1.1
3/2006

ZyXEL
Unleash Networking Power

1 Introducing the ZyXEL X-550

The ZyXEL X-550 XtremeMIMO™ 802.11g Wireless Router is a broadband sharing gateway with a built-in wireless LAN access point, four-port 10/100 Mbps switch that makes it easy for people to set up a small home/office network and share Internet access via a broadband (cable/DSL) modem, and a USB port enabling Microsoft Windows Connect Now (WCN) technology. Key features of the ZyXEL X-550 include an embedded 802.11g wireless Access Point, support for the advanced WPA2 wireless security, firewall with DoS protection, VPN pass-through, NAT and UPnP. See your *User's Guide* for more details on all ZyXEL X-550 features.

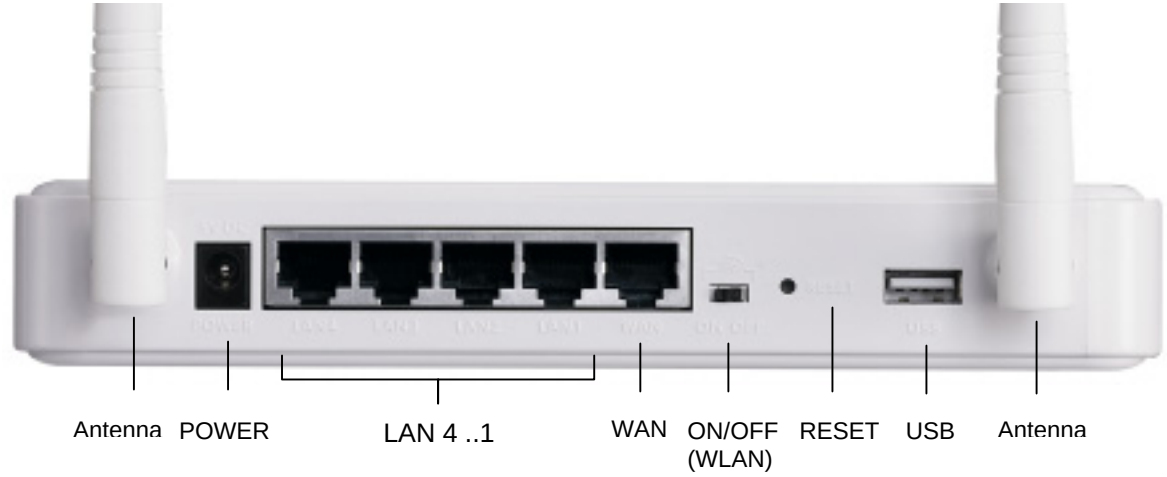
You should have an Internet account already set up and have been given most of the following information.

Internet Account Information

Your device's WAN IP Address (if given): _____		
DNS Server IP Address (if given): First _____, Second _____, Third _____		
Encapsulation:	(select one below):	
❍ **Ethernet**	Service Type: _____	
	Login Server IP Address: _____	
	User Name: _____	Password: _____
❍ **PPPoE**	(PPPoE) Service Name: _____	
	User Name: _____	Password: _____

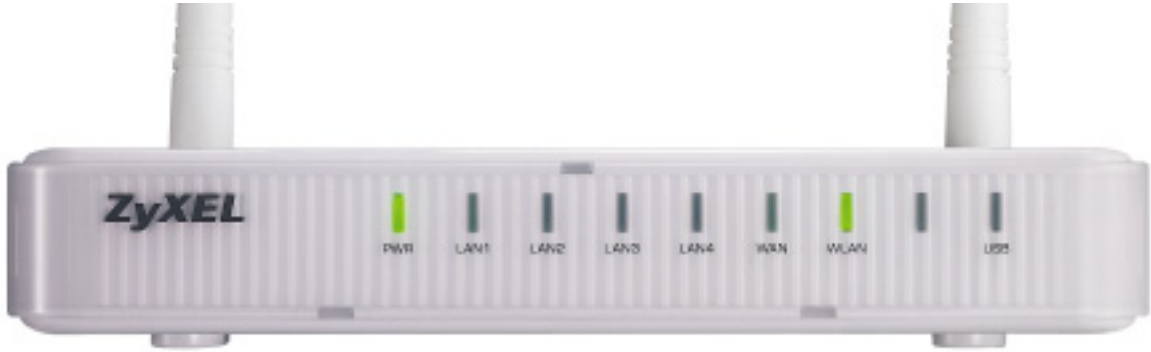
2 Hardware Installation

2.1 Rear Panel



LABEL	DESCRIPTION
POWER	Connect the barrel type connector of the included *power adaptor to this power socket. **note: please use only the included power adapter to power the X-550*
LAN 1-4	Use an Ethernet cable to connect at least one computer for initial ZyXEL X-550 configuration. These ports are *auto-negotiating and **auto-sensing. *automatic switching to 10 or 100Mbps throughput speeds **automatic adjustment to crossover or straight-through Ethernet cabling
WAN	Connect your cable/satellite/DSL modem to this port with the cable that came with your modem.
ON/OFF (WLAN)	Slide this switch to enable (**ON**) or disable (**OFF**) the 802.11b/g MIMO wireless LAN feature.
RESET	The Reset button is used to restore the X-550 back to the factory default settings. Push the button for 10 seconds to reset to factor defaults.
USB	To be used with the Microsoft® Windows Connect Now feature and not with storage.
Antenna	The ZyXEL X-550 includes 2 adjustable external Smart Antennas and 2 internal Smart Antennas.

2.2 Front Panel LEDs



LED	COLOR	STATUS	DESCRIPTION
PWR		Off	The ZyXEL X-550 is not receiving power.
	Green	On	The ZyXEL X-550 is powered and ready.
		Blinking	The ZyXEL X-550 is resetting to factory defaults.
LAN 1- 4		Off	No device is connected to the LAN port.
	Green	On	An Ethernet device is connected to the LAN port.
		Blinking	The ZyXEL X-550 is sending/receiving data through a specific LAN port.
WAN		Off	The WAN connection is not ready, or has failed.
	Green	On	The ZyXEL X-550 has a successful WAN connection.
		Blinking	The ZyXEL X-550 is sending/receiving data.
WLAN		Off	The WLAN connection is turned off.
	Green	On	The WLAN is active.
		Blinking	The WLAN is sending/receiving data.
USB		Off	The USB port is currently not in use
	Green	On	The USB light indicates the status for Windows Connect Now. After a successful setup, the light will blink 3 times.

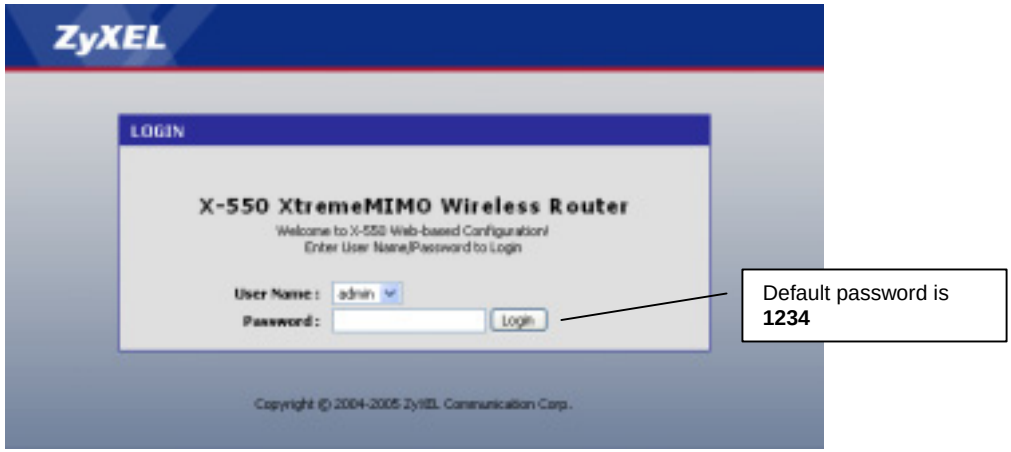
3 Configuring Your ZyXEL X-550

Choose one of these methods to access and configure the ZyXEL X-550. This *Quick Start Guide shows* you how to use the web configurator setup wizard only. See your *User's Guide* for background information on all ZyXEL X-550 features.

3.1 Accessing Your ZyXEL X-550 For The Very First Time Via Web Configurator

1. Launch your web browser. Enter "192.168.10.1" as the web site address.

2. A **LOGIN** screen will pop up asking you for a user name and password. The user name is **admin** and enter the password in the password field (default factory setting is **1234**). Click **Login**.



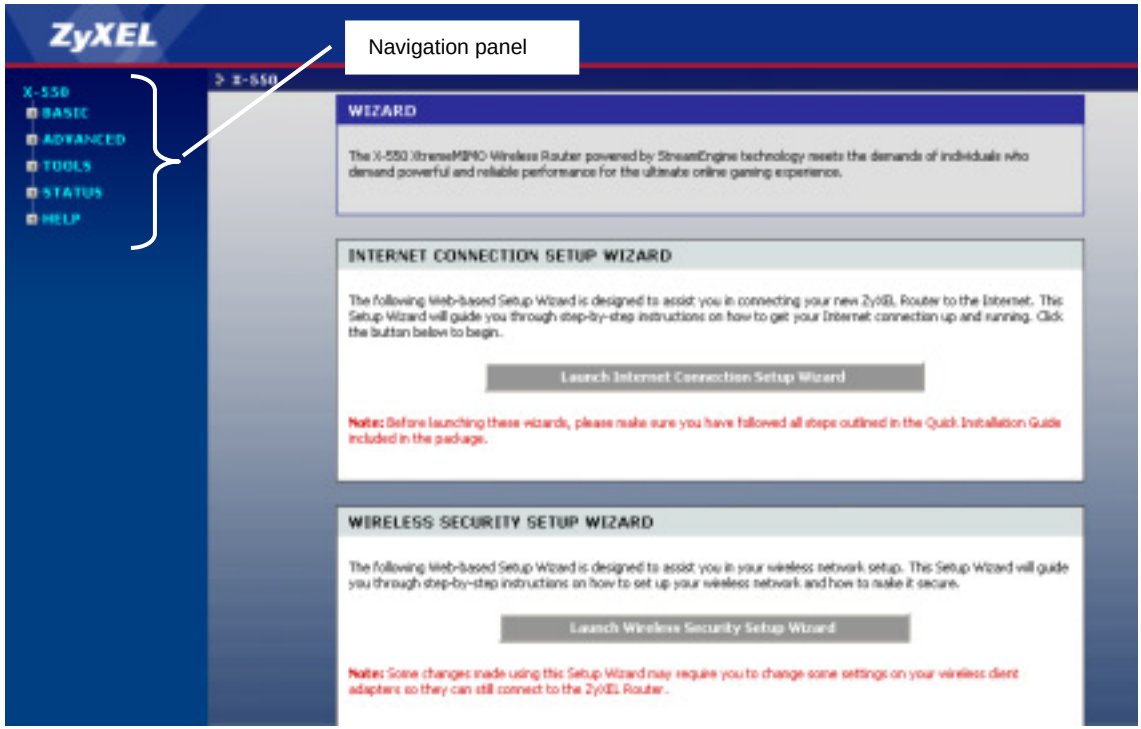
It is highly recommended you change the default password! You can change the login password in the Internet access wizard or the ADMIN screen (click TOOLS > Admin) on the Navigation panel.

3. You should see the **DEVICE INFO** screen displaying the current device information (such as the firmware version and WAN IP address, etc.).

3.2 Wizard Setup

Click **BASIC > START** on the navigation panel to configure the X-550 using the wizard screens.

- Click **Launch Internet Connection Setup Wizard** to begin a series of screens to help you configure your ZyXEL X-550 Internet connection.
- Click **Launch Wireless Security Setup Wizard** to begin a series of screens to help you configure your ZyXEL X-550 wireless security settings.
- Click a link on the left in the navigation panel to configure a specific ZyXEL X-550 feature. See your *User's Guide* for more details on all ZyXEL X-550 features.



Use the following buttons to navigate the Wizard:

Cancel	Click **Cancel** in any wizard screen to return to the main **WIZARD** screen. All unsaved custom settings will be lost.
Next	Click **Next** to continue to the next screen.
Previous	Click **Previous** to return to the last screen.

No configuration changes will be saved to the ZyXEL X-550 until you go through the entire setup process and click **Finish**.

3.2.1 Internet Connection Setup Wizard

The wizard consists of a series of screens to help you configure your ZyXEL X-550 for wireless stations to access your wired LAN.

1. Click **Launch Internet Connection Setup Wizard** to display the first wizard screen.

WELCOME TO THE ZYXEL SETUP WIZARD
This wizard will guide you through a step-by-step process to configure your new ZyXEL router and connect to the Internet.
Step 1: Set your Password
Step 2: Select your Time Zone
Step 3: Configure your Internet Connection
Step 4: Save Settings and Connect
Next
Cancel

This step introduces you to the setup wizard and outlines the steps to setting up your router.

Click **Next** to continue.

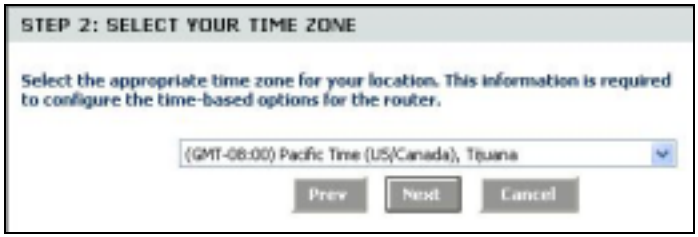
In order to provide better security against intruders, the ZyXEL X-550 will ask you to change your password on your unit at this time.

STEP 1: SET YOUR PASSWORD
By default, your new ZyXEL Router does not have a password configured for administrator access to the Web-based configuration pages. To secure your new networking device, please set and verify a password below:
Password :
Verify Password :
Prev
Next
Cancel

Please type in your new password in the **Password** field and retype your password in **Verify Password** field to verify.

Click **Next** to continue.

Passwords are case sensitive so make sure your CAPS key is not accidentally depressed

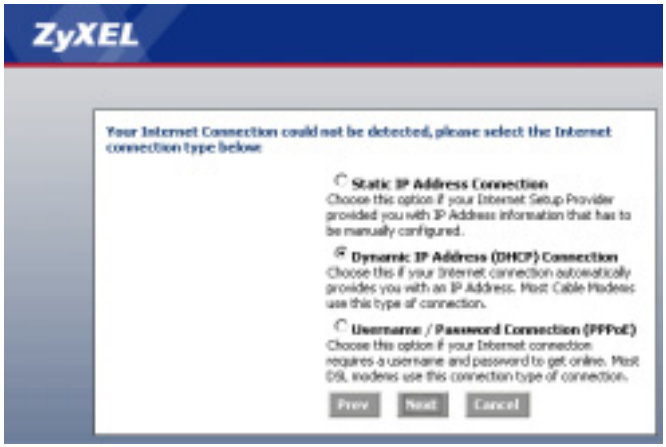

STEP 2: SELECT YOUR TIME ZONE
Select the appropriate time zone for your location. This information is required to configure the time-based options for the router.
(GMT-08:00) Pacific Time (US/Canada), Tijuana
Prev
Next
Cancel

Please select the time zone at which you are currently located. For example: If you are located in California, then you would select *(GMT-08:00) Pacific Time (US/Canada), Tijuana.*

Click **Next** to continue.

The following steps describe how to use the ZyXEL Installation Wizard in regards to the type of Internet connection you might have. Please read all of the *Quick Start Guide* and choose the appropriate method of installation before continuing.

2. Selecting Your Internet Connection Type


ZyXEL
Your Internet Connection could not be detected, please select the Internet connection type below:
Static IP Address Connection
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
Dynamic IP Address (DHCP) Connection
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
Username / Password Connection (PPPoE)
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
Prev
Next
Cancel

The next steps will take you through the three possible ISP configurations:

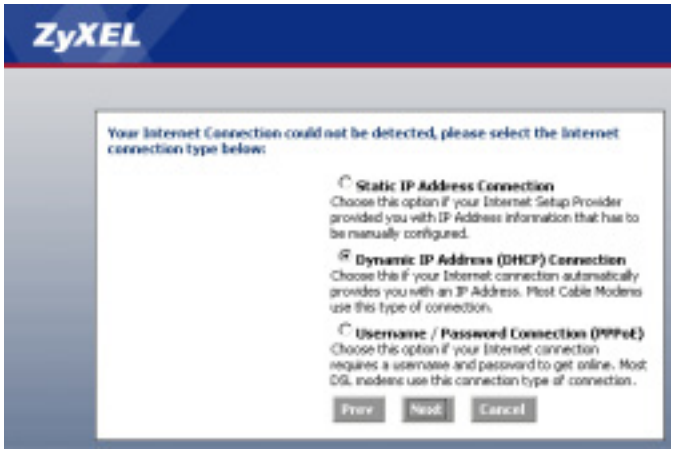
- Static IP Address Connection
- Dynamic IP Address Connection
- Username/Password Connection

Please choose the appropriate type of connection your ISP uses.

If you do not know, please call your ISP and find out now

Click **Next** to continue.

Setting Up a Dynamic IP Address (DHCP) Connection


ZyXEL
Your Internet Connection could not be detected, please select the Internet connection type below:
Static IP Address Connection
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
Dynamic IP Address (DHCP) Connection
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
Username / Password Connection (PPPoE)
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
Prev
Next
Cancel

If you have an ISP that uses DHCP, then please select the **Dynamic IP Address (DHCP) Connection** bubble.

Click **Next** to continue.

DYNAMIC IP ADDRESS (DHCP) CONNECTION
To set up this connection, please make sure that you are connected to the ZyXEL Router with the PC that was originally connected to your broadband connection. If you are, then click the Clone MAC button to copy your computer's MAC Address to the ZyXEL Router.
MAC Address :
(optional)
Clone Your PC's MAC Address
Host Name :
Note: You may also need to provide a Host Name. If you do not have or know this information, please contact your ISP.
Prev
Next
Cancel

Click on the button **Clone Your PC's MAC Address** to make a copy of the MAC address currently used on your computer to connect to your ISP onto the ZyXEL X-550.

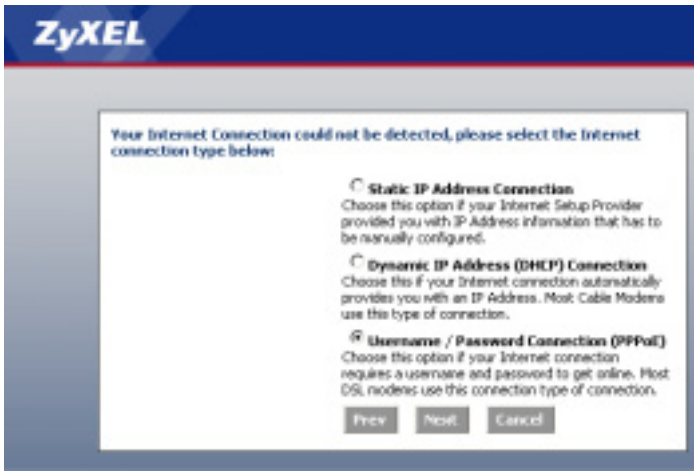
If a Host Name is necessary to connect as well, please write It in the **Host Name** field now. If you do not know if you require one, please contact your Internet Service Provider who will be able to tell you.

Click **Next** to continue.

SETUP COMPLETE!
The Setup Wizard has completed. Click the Connect button to save your settings and reboot the router.
Prev
Cancel
Connect

Congratulations! You can now click **Connect** to save the settings you have just configured and connect to the Internet.

Setting Up Username/Password (PPPoE) Connection


ZyXEL
Your Internet Connection could not be detected, please select the Internet connection type below:
Static IP Address Connection
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
Dynamic IP Address (DHCP) Connection
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
Username / Password Connection (PPPoE)
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
Prev
Next
Cancel

If your ISP require you to use a PPPoE type of connection, please click on the **Username / Password Connection (PPPoE)** bubble.

Click **Next** to continue.

SET USERNAME AND PASSWORD CONNECTION (PPPOE)
To set up this connection you will need to have a Username and Password from your Internet Service Provider. If you do not have this information, please contact your ISP.
User Name :
Password :
Verify Password :
Service Name :
(optional)
Note: You may also need to provide a Service Name. If you do not have or know this information, please contact your ISP.
Prev
Next
Cancel

Type in the **User Name** & **Password**, provided by your ISP.

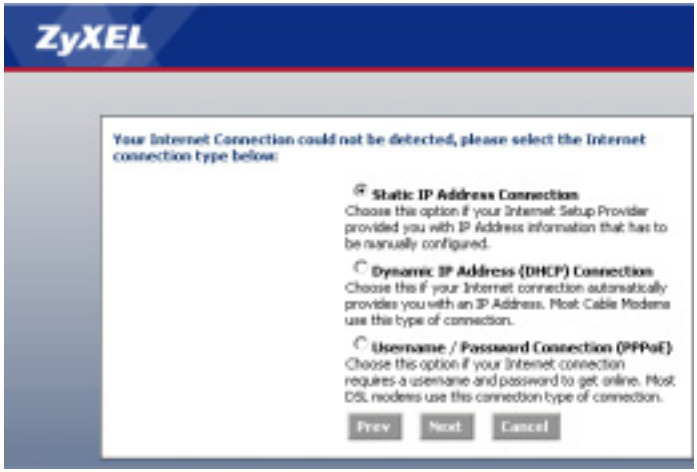
Configure the **Service Name** field when required by your ISP with the information given.

Click **Next** to continue.

SETUP COMPLETE!
The Setup Wizard has completed. Click the Connect button to save your settings and reboot the router.
Prev
Cancel
Connect

Congratulations! You can now click **Connect** to save the settings you have just configured and connect to the Internet.

Setting Up Static IP Address Connection


ZyXEL
Your Internet Connection could not be detected, please select the Internet connection type below:
Static IP Address Connection
Choose this option if your Internet Setup Provider provided you with IP Address information that has to be manually configured.
Dynamic IP Address (DHCP) Connection
Choose this if your Internet connection automatically provides you with an IP Address. Most Cable Modems use this type of connection.
Username / Password Connection (PPPoE)
Choose this option if your Internet connection requires a username and password to get online. Most DSL modems use this connection type of connection.
Prev
Next
Cancel

If your ISP require you to use a static IP, please click on the **Static IP Address Connection** bubble.

Click **Next** to continue.

SET STATIC IP ADDRESS CONNECTION
To set up this connection you will need to have a complete list of IP information provided by your Internet Service Provider. If you have a Static IP connection and do not have this information, please contact your ISP.
IP Address :
0.0.0.0
Subnet Mask :
255.255.255.0
Gateway Address :
0.0.0.0
Primary DNS Address :
0.0.0.0
Secondary DNS Address :
0.0.0.0
Prev
Next
Cancel

Type in the **IP Address, Subnet Mask, Gateway Address, Primary DNS Address and Secondary DNS Address** provided by your ISP in the available fields.

If you have any questions in regards to what IP address to fill in to the fields, please obtain that information from your Internet Service Provider.

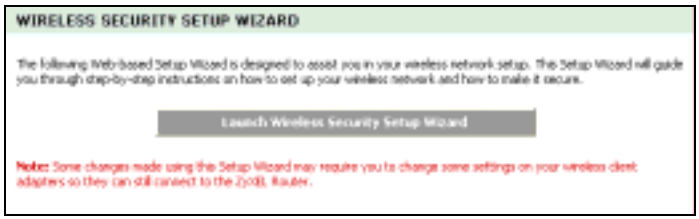
Click **Next** to continue.

SETUP COMPLETE!
The Setup Wizard has completed. Click the Connect button to save your settings and reboot the router.
Prev
Cancel
Connect

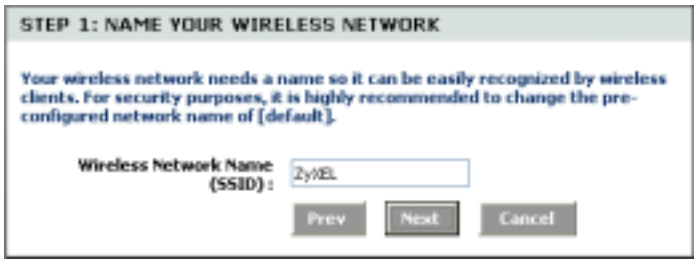
Congratulations! You can now click **Connect** to save the settings you have just configured and connect to the Internet.

Please at this time reboot both your cable or DSL modem and your X-550.

3.2.2 Wireless Security Setup Wizard

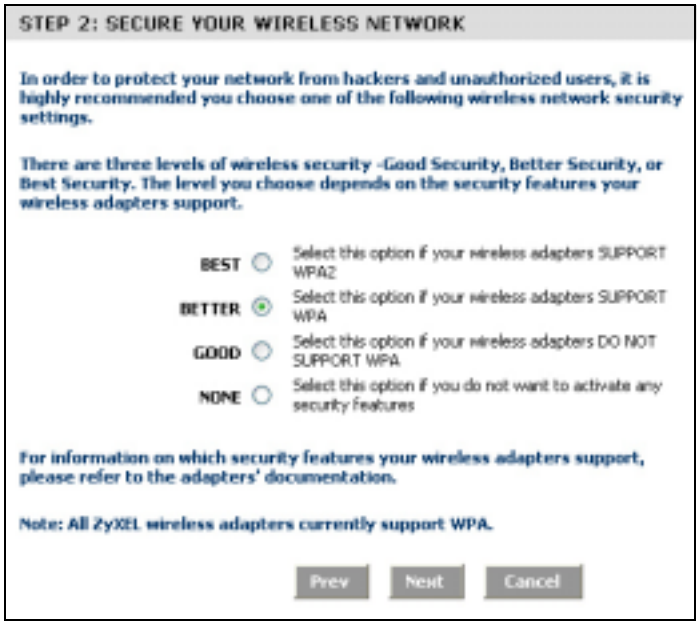

WIRELESS SECURITY SETUP WIZARD
The following Web-based Setup Wizard is designed to assist you in your wireless network setup. The Setup Wizard will guide you through step-by-step instructions on how to set up your wireless network and how to make it secure.
Launch Wireless Security Setup Wizard
Note: Some changes made using this Setup Wizard may require you to change some settings on your wireless client adapters so they can still connect to the ZyXEL Router.

Begin by clicking on the **Launch Wireless Security Setup Wizard** button.


STEP 1: NAME YOUR WIRELESS NETWORK
Your wireless network needs a name so it can be easily recognized by wireless clients. For security purposes, it is highly recommended to change the pre-configured network name of [default].
Wireless Network Name (SSID) :
ZyXEL
Prev
Next
Cancel

Type a unique name in **Wireless Network Name (SSID)** to identify your wireless LAN.

Click **Next** to continue.


STEP 2: SECURE YOUR WIRELESS NETWORK
In order to protect your network from hackers and unauthorized users, it is highly recommended you choose one of the following wireless network security settings.
There are three levels of wireless security -Good Security, Better Security, or Best Security. The level you choose depends on the security features your wireless adapters support.
BEST
Select this option if your wireless adapters SUPPORT WPA2
BETTER
Select this option if your wireless adapters SUPPORT WPA
GOOD
Select this option if your wireless adapters DO NOT SUPPORT WPA
NONE
Select this option if you do not want to activate any security features
For information on which security features your wireless adapters support, please refer to the adapters' documentation.
Note: All ZyXEL wireless adapters currently support WPA.
Prev
Next
Cancel

If your wireless adapters on your client devices support WPA2*, select the bubble **Best**.

If your wireless adapters on your client devices support WPA, select the bubble **Better**.

If your wireless adapters on your client devices do NOT support WPA2 or WPA, select the bubble **Good**.

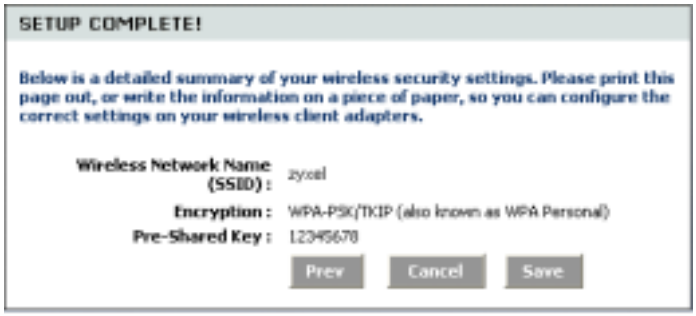
For no security, select **None**.

Click **Next** to continue.

STEP 3: SET YOUR WIRELESS SECURITY KEY
Once you have selected your security level - you will need to set a wireless security key.
Wireless Security Key :
(8 to 63 characters)
Note: You will need to enter the unique security key at the summary page into your wireless clients enable proper wireless communication.
Prev
Next
Cancel

Type in a 8 to 63 character password which will be used to secure your ZyXEL X-550 from outside intrusion.

Click **Next** to continue.


SETUP COMPLETE!
Below is a detailed summary of your wireless security settings. Please print this page out, or write the information on a piece of paper, so you can configure the correct settings on your wireless client adapters.
Wireless Network Name (SSID) :
zyxel
Encryption :
WPA-PSK(TKIP (also known as WPA Personal)
Pre-Shared Key :
12345678
Prev
Cancel
Save

Congratulations! You have just setup Wireless Security measure that will prevent and/or hinder outsiders from intruding into your network!

The screen shown is only an example. Yours might differ slightly.

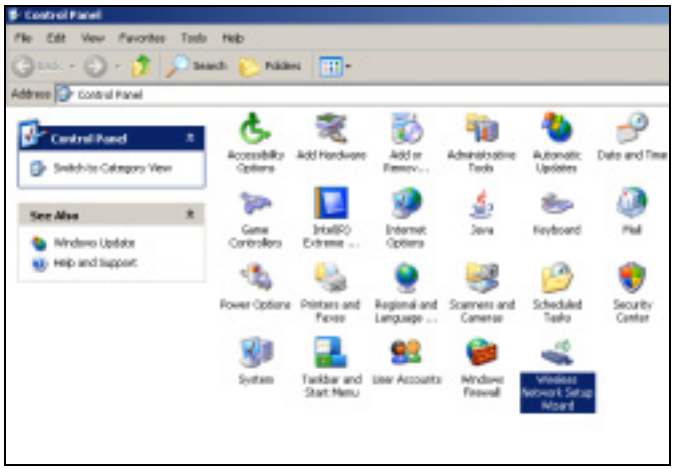
Verify your settings and click **Save** to save the changes.

3.3 Setup a Wireless Connection using Windows Connect Now

Windows Connect Now is a new feature released by Microsoft in their update to Windows XP, Service Pack 2. With Windows Connect Now, you can wireless connect devices without any hassle whatsoever. To take advantage of this please make sure you have the following available and on-hand:

- **USB Flash Drive with at least 300K of available memory**
- **Windows XP with Service Pack 2 installed computer**

When you are ready, please proceed to the next step.

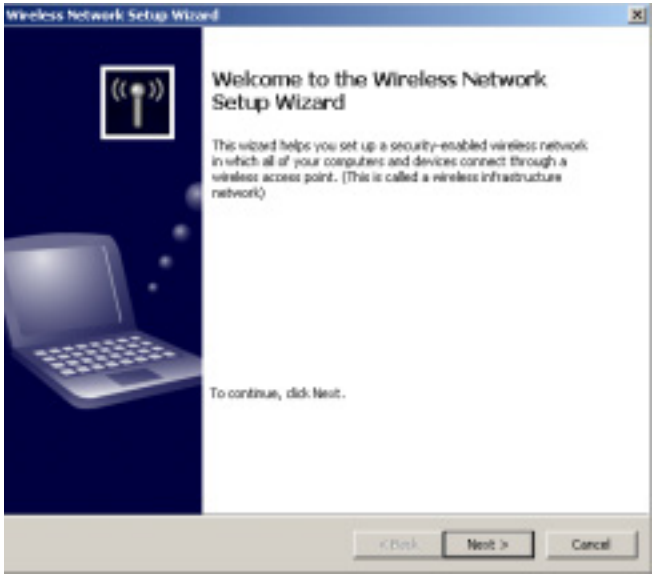


Click on the **Start** menu and then the **Control Panel** where you will find the **Wireless Network Setup Wizard.**

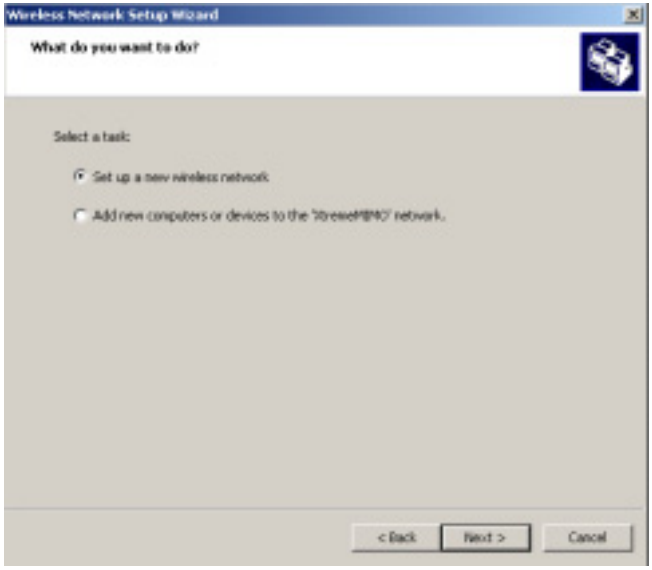
Double click on **Wireless Network Setup Wizard** to proceed to the next step.

Microsoft® Windows Connect Now may ONLY be used with Windows XP operating systems with the Service Pack 2 upgrade installed! If you do not have the necessary operating system, please upgrade to XP in order to benefit from the ZyXEL X-550 Windows Connect Now feature. For more information please visit:

- http://www.microsoft.com (WCN)
- http://www.microsoft.com (SP2)


Wireless Network Setup Wizard
Welcome to the Wireless Network Setup Wizard
This wizard helps you set up a security-enabled wireless network in which all of your computers and devices connect through a wireless access point. (This is called a wireless infrastructure network)
To continue, click Next.
< Back
Next >
Cancel

Click **Next** to continue.


Wireless Network Setup Wizard
What do you want to do?
Select a task:
Set up a new wireless network
Add new computers or devices to the 'XtremeMIMO' network.
< Back
Next >
Cancel

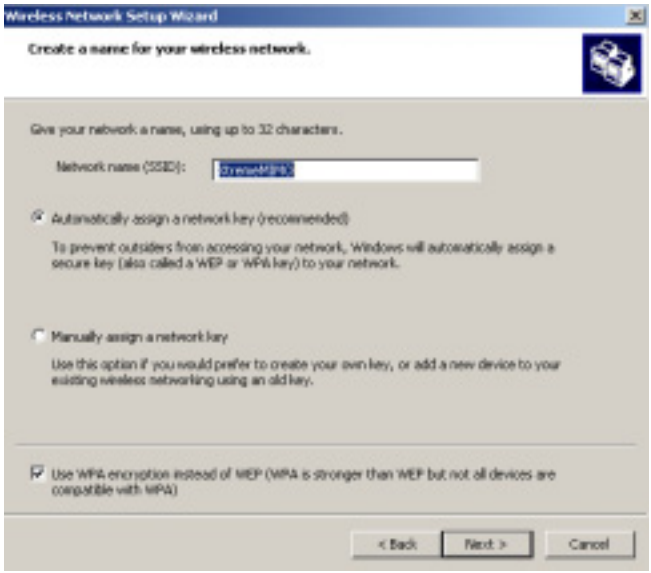
If at this time you have not created a wireless network, please choose: **Set up a new wireless network**. If you already have your wireless network setup and would like to add more devices onto the network, please choose **Add new computers or devices to the "*name of your network*" network.**

As you can see in the diagram, the network we currently have setup is named XtremeMIMO

Click **Next** to continue.

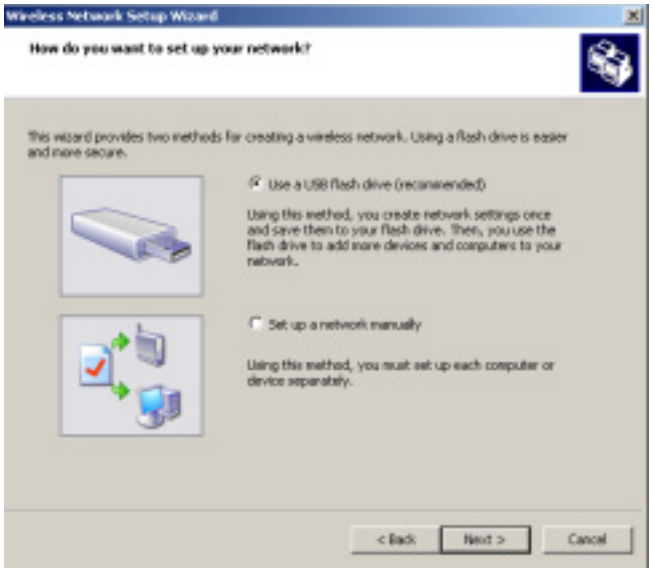
To create a new wireless network, please follow the steps below. For instructions on how to add devices onto an existing network, please skip the step of "create a

name for your wireless network" and proceed to the step of "How do you want to set up your network?".


Wireless Network Setup Wizard
Create a name for your wireless network.
Give your network a name, using up to 32 characters.
Network name (SSID):
Automatically assign a network key (recommended)
To prevent outsiders from accessing your network, Windows will automatically assign a secure key (also called a WEP or WPA key) to your network.
Manually assign a network key
Use this option if you would prefer to create your own key, or add a new device to your existing wireless networking using an old key.
Use WPA encryption instead of WEP (WPA is stronger than WEP but not all devices are compatible with WPA)
< Back
Next >
Cancel

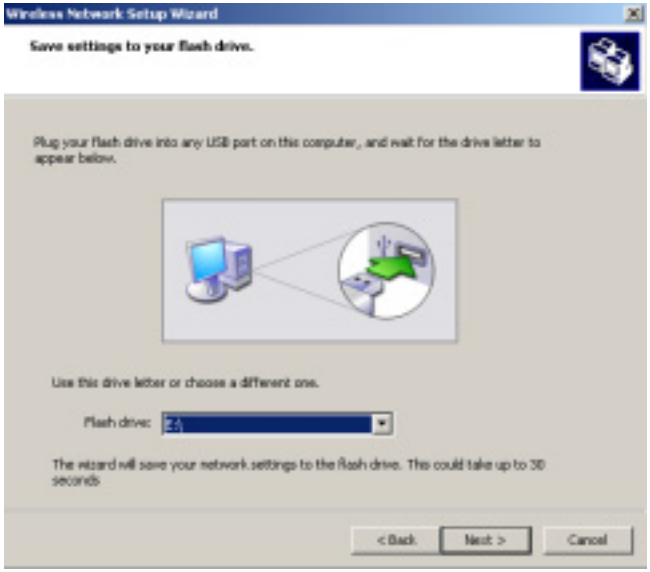
Add a new network name in **Network Name (SSID)** field. Next choose for Windows to **Automatically assign a network key**. Finally make sure that the checkbox for **Use WPA encryption instead of WEP** is checked before proceeding further.

Click **Next** to continue.


Wireless Network Setup Wizard
How do you want to set up your network?
This wizard provides two methods for creating a wireless network. Using a flash drive is easier and more secure.
Use a USB flash drive (recommended)
Using this method, you create network settings once and save them to your flash drive. Then, you use the flash drive to add more devices and computers to your network.
Set up a network manually
Using this method, you must set up each computer or device separately.
< Back
Next >
Cancel

Choose **Use a USB flash drive**.

Click **Next** to continue.


Wireless Network Setup Wizard
Save settings to your flash drive.
Plug your flash drive into any USB port on this computer, and wait for the drive letter to appear below.
Use this drive letter or choose a different one.
Flash drive:
The wizard will save your network settings to the flash drive. This could take up to 30 seconds
< Back
Next >
Cancel

Make sure your USB flash drive is installed and your computer has recognized the USB drive. Then click **Next** to continue.

Wireless Network Setup Wizard
Transfer your network settings to your other computers or devices.
Your network settings are saved to the flash drive. Now follow these steps:
1. Plug the flash drive into your wireless access point. Many devices will blink their lights three times when the transfer is complete; otherwise wait 30 seconds.
2. Plug the flash drive into each computer or device you want to add to your network.
3. Plug the flash drive back into this computer, and then click Next.
< Back
Next >
Cancel

Follow the on-screen instructions provided and when ready, click **Next** to continue.

1. Plug the flash drive into your wireless access point. Many devices will blink their lights three times when the transfer is complete; otherwise wait 30 seconds.
2. Plug the flash drive into each computer or device you want to add to your network.
3. Plug the flash drive back into this computer, and then click **Next.**.

Wireless Network Setup Wizard
The wizard completed successfully
Your wireless network is now ready to use. You have successfully set up the following devices:
Print Network Settings
For security reasons, remove network settings from my flash drive
To close this wizard, click Finish.
< Back
Finish
Cancel

Congratulations! You are now operating in a secure environment.

3.4 Test Your Internet Connection

Launch your web browser and navigate to www.us.zyxel.com. You don't need a dial-up program such as Dial Up Networking. Internet access is just the beginning. Refer to the *User's Guide* for more detailed information on the complete range of ZyXEL X-550 features.

4 Troubleshooting

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on when you turn on the ZyXEL X-550.	Make sure that you have the correct power adapter connected to the ZyXEL X-550 and plugged in to an appropriate power source. Check all cable connections. If the LEDs still do not turn on, you may have a hardware problem. In this case, you should contact ZyXEL.
Cannot access the ZyXEL X-550 from the LAN.	Check the cable connection between the ZyXEL X-550 and your computer or hub. Refer to the *Rear Panel* section for details. Ping the ZyXEL X-550 from a LAN computer. Make sure your computer Ethernet card is installed and functioning properly.
Cannot ping any computer on the LAN.	If the 10/100M LAN LEDs are off, check the cable connections between the ZyXEL X-550 and your LAN computers. Verify that the IP address and subnet mask of the ZyXEL X-550 and the LAN computers are in the same IP address range.
Cannot get a WAN IP address from the ISP.	If you are using the Cable modem with the ZyXEL X-550, you have to power off your Cable modem for around 2~3 minutes after you connect your Cable modem with the ZyXEL X-550. The WAN IP is provided after the ISP verifies the MAC address, host name or user ID. Find out the verification method used by your ISP and configure the corresponding fields.
	If the ISP checks the WAN MAC address, you should clone the MAC address from a LAN computer. Click **WAN** on the Navigation panel and then click **Advanced** button to see the detail. Check **MAC Cloning Enabled** checkbox and then click **Clone Your PC's MAC Address** button to get MAC address automatically, or enter MAC address you are cloning manually.
	If the ISP checks the host name, enter your computer's name (refer to the *Wizard Setup* section in the *User's Guide*) in the **Host Name** field in **WAN** on the Navigation panel.
	If the ISP checks the user ID, click **WAN** and check your service type, user name, and password.
Cannot access the Internet.	Check the ZyXEL X-550's connection to the cable/DSL device. Unplug the power of the Cable/DSL modem and ZyXEL X-550 and plug it back to reboot the units.
	Click **WAN** to verify your settings.

5 Customer Support

Please have the following information ready when you contact customer support.

- **Serial number** for your specific product
- **Warranty Information**
- **Date** that you received or purchased your device
- Brief description of the problem including any steps that you have taken.

SUPPORT E-MAIL	TELEPHONE	WEB SITE
support@zyxel.com	+1-800-978-7222	www.us.zyxel.com